

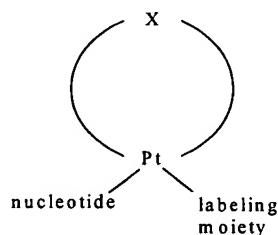
**IN THE CLAIMS**

Please cancel claims 30, 31, 33, 52, 53, 55, 76, 77, 79, 102, 103, 105, 125, 126 and 128 without prejudice.

Please amend claims 23, 28, 32, 43, 50, 54, 68, 74, 78, 93, 118 and 127 as follows:

1-22. (Cancelled)

23. (Currently Amended) A labeled nucleotide having formula:



wherein:

X represents an aliphatic diamine; and

the labeling moiety comprises a label and a spacer, wherein the spacer is coupled at one end to the Pt atom and at the other end to the label, the spacer comprising a chain having at least four carbon atoms and at least one oxygen atom in the chain.

24. (Previously Presented) The labeled nucleotide according to claim 23, wherein the aliphatic diamine has 2-6 carbon atoms.

25. (Previously Presented) The labeled nucleotide according to claim 23, wherein the aliphatic diamine has the formula  $G_2NCH_2CH_2NG_2$ , wherein G represents H or an alkyl group of from 1 to 6 carbon atoms.

26. (Previously Presented) The labeled nucleotide according to claim 23, wherein X represents ethylenediamine.

27. (Previously Presented) The labeled nucleotide according to claim 23, wherein X represents N,N,N',N'-tetramethylmethylenediamine.

28. (Currently Amended) The labeled nucleotide according to claim 23, wherein the spacer comprises no more than twenty carbon atoms.

29. (Previously Presented) The labeled nucleotide according to claim 28, wherein the carbon atoms are non-branched.

30. (Cancelled) ~~The labeled nucleotide according to claim 23, wherein the spacer comprises at least four carbon atoms and at least one heteroatom.~~

31. (Cancelled) ~~The labeled nucleotide according to claim 30, wherein the heteroatom is oxygen.~~

32. (Currently Amended) The labeled nucleotide according to claim 23 31, wherein the spacer is 1,8-diamino-3,6-dioxaoctane.

33. (Cancelled) ~~The labeled nucleotide according to claim 23, wherein the spacer is an oligolysine or a polylysine.~~

34. (Previously Presented) The labeled nucleotide according to claim 23, wherein the label is radioactive.

35. (Previously Presented) The labeled nucleotide according to claim 23, wherein the label is an enzyme.

36. (Previously Presented) The labeled nucleotide according to claim 23, wherein the label is a component of a specific binding pair.

37. (Previously Presented) The labeled nucleotide according to claim 36, wherein the specific binding pair is biotin and either avidin or streptavidin.

38. (Previously Presented) The labeled nucleotide according to claim 23, wherein the label is a dye, a fluorochrome, or a reducing agent.

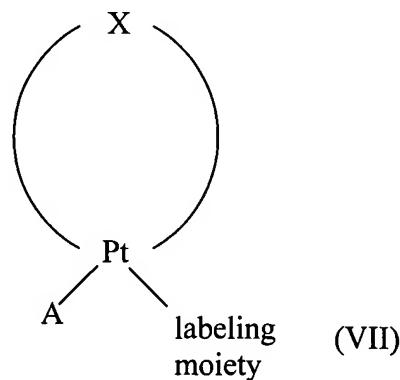
39. (Previously Presented) The labeled nucleotide according to claim 23, wherein the label is digoxigenin.

40. (Previously Presented) The labeled nucleotide according to claim 23, wherein the nucleotide is adenine, thymidine, cytosine, guanine, or uridine.

41. (Previously Presented) The labeled nucleotide according to claim 23, wherein the nucleotide is adenine, thymidine, cytosine, and either guanine or uridine.

42. (Previously Presented) The labeled nucleotide according to claim 23, wherein the nucleotide is a purine.

43. (Currently Amended) A method for labeling a nucleotide comprising:  
providing a nucleotide;  
providing a labeling substance having formula VII,



wherein:

X represents an aliphatic diamine;

A represents a reactive moiety capable of reacting with the nucleotide, thereby attaching the nucleotide to the labeling substance when the reactive moiety reacts with the nucleotide;

the labeling moiety comprises a spacer comprising an electron donating moiety bonded to the platinum atom, a chain having at least four carbon atoms and at least one oxygen atom in the chain, the chain attached to the electron donating moiety, and a label attached to the end of the chain distal to the electron donating moiety; and,

reacting the reactive moiety with the nucleotide, thereby labeling the nucleotide.

44. (Previously Presented) The method according to claim 43, wherein X represents an aliphatic diamine having 2-6 carbon atoms.

45. (Previously Presented) The method according to claim 43, wherein X represents an aliphatic diamine having the formula  $G_2NCH_2CH_2NG_2$ , wherein G represents H or an alkyl group of from 1 to 6 carbon atoms.

46. (Previously Presented) The method according to claim 43, wherein X represents ethylenediamine.

47. (Previously Presented) The method according to claim 43, wherein X represents  $N,N,N',N'$ -tetramethylethylenediamine.

48. (Previously Presented) The method according to claim 43, wherein A represents  $NO_3^-$ ,  $SO_3^-$ ,  $Cl^-$ ,  $I^-$ , other halogen or  $Me_2SO$ .

49. (Previously Presented) The method according to claim 43, wherein A represents  $NO_3^-$ .

50. (Currently Amended) The method according to claim 43, wherein the spacer comprises no more than twenty carbon atoms.

51. (Previously Presented) The method according to claim 50, wherein the carbon atoms are non-branched.

52. (Cancelled) ~~The method according to claim 43, wherein the spacer comprises at least four carbon atoms and at least one heteroatom.~~

53. (Cancelled) ~~The method according to claim 52, wherein the heteroatom is oxygen.~~

54. (Currently Amended) The method according to claim 43 53, wherein the spacer is 1,8-diamino-3,6-dioxaoctane.

55. (Cancelled) ~~The method according to claim 43, wherein the spacer is an oligolysine or a polylysine.~~

56. (Previously Presented) The method according to claim 43, wherein the electron donating moiety is an amino group or a thiolate group.

57. (Previously Presented) The method according to claim 56, wherein the amino group is an aromatic amino group.

58. (Previously Presented) The method according to claim 56, wherein the amino group is an imidazole or purine group.

59. (Previously Presented) The method according to claim 43, wherein the label is radioactive.

60. (Previously Presented) The method according to claim 43, wherein the label is an

enzyme.

61. (Previously Presented) The method according to claim 43, wherein the label is a component of a specific binding pair.

62. (Previously Presented) The method according to claim 61, wherein the specific binding pair is biotin and either avidin or streptavidin.

63. (Previously Presented) The method according to claim 43, wherein the label is a dye, a fluorochrome, or a reducing agent.

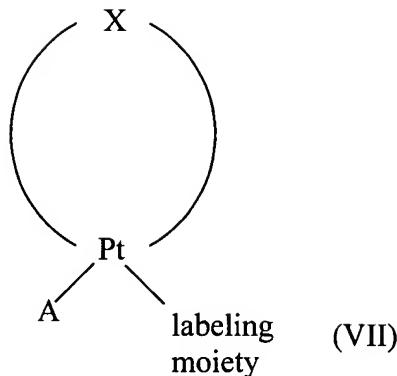
64. (Previously Presented) The method according to claim 43, wherein the label is digoxigenin.

65. (Previously Presented) The method according to claim 43, wherein the nucleotide is adenine, thymidine, cytosine, guanine, or uridine.

66. (Previously Presented) The method according to claim 43, wherein the nucleotide is adenine, thymidine, cytosine, and either guanine or uridine, or guanine and uridine.

67. (Previously Presented) The method according to claim 43, wherein the nucleotide is a purine.

68. (Currently Amended) A labeling substance having formula VII:



wherein:

X represents an aliphatic diamine;

A represents a reactive moiety; and

the labeling moiety comprises a label and a spacer, wherein the spacer is coupled at one end to the Pt atom and at the other end to the label, the spacer comprising a chain having at least four carbon atoms and at least one oxygen atom in the chain.

69. (Previously Presented) The labeling substance according to claim 68, wherein X represents an aliphatic diamine having 2-6 carbon atoms.

70. (Previously Presented) The labeling substance according to claim 68, wherein X represents an aliphatic diamine having the formula  $G_2NCH_2CH_2NG_2$ , wherein G represents H or an alkyl group of from 1 to 6 carbon atoms.

71. (Previously Presented) The labeling substance according to claim 68, wherein X represents ethylenediamine.

72. (Previously Presented) The labeling substance according to claim 68, wherein X represents N,N,N',N'-tetramethylethylenediamine.

73. (Previously Presented) The labeling substance according to claim 68, wherein A represents  $\text{NO}_3^-$ ,  $\text{SO}_3^-$ ,  $\text{Cl}^-$ ,  $\text{I}^-$ , other halogen or  $\text{Me}_2\text{SO}$ .

74. (Currently Amended) The labeling substance according to claim 68, wherein the spacer comprises no more than twenty carbon atoms.

75. (Previously Presented) The labeling substance according to claim 74, wherein the carbon atoms are non-branched.

76. (Cancelled) ~~The labeling substance according to claim 68, wherein the spacer comprises at least four carbon atoms and at least one heteroatom.~~

77. (Cancelled) ~~The labeling substance according to claim 76, wherein the heteroatom is oxygen.~~

78. (Currently Amended) The labeling substance according to claim ~~68~~<sup>77</sup>, wherein the spacer is 1,8-diamino-3,6-dioxaoctane.

79. (Cancelled) ~~The labeling substance according to claim 68, wherein the spacer is an oligolysine or a polylysine.~~

80. (Previously Presented) The labeling substance according to claim 68, wherein the electron donating moiety is an amino group or a thiolate group.

81. (Previously Presented) The labeling substance according to claim 80, wherein the amino group is an aromatic amino group.

82. (Previously Presented) The labeling substance according to claim 80, wherein the amino group is an imidazole or purine group.

83. (Previously Presented) The labeling substance according to claim 68, wherein the

spacer reactive moiety is NH<sub>2</sub>.

84. (Previously Presented) The labeling substance according to claim 68, wherein the label is radioactive.

85. (Previously Presented) The labeling substance according to claim 68, wherein the label is an enzyme.

86. (Previously Presented) The labeling substance according to claim 68, wherein the label is a component of a specific binding pair.

87. (Previously Presented) The labeling substance according to claim 86, wherein the specific binding pair is biotin and either avidin or streptavidin.

88. (Previously Presented) The labeling substance according to claim 68, wherein the label is a dye, a fluorochrome, or a reducing agent.

89. (Previously Presented) The labeling substance according to claim 68, wherein the label is digoxigenin.

90. (Previously Presented) The labeling substance according to claim 68, wherein the nucleotide is adenine, thymidine, cytosine, guanine, or uridine.

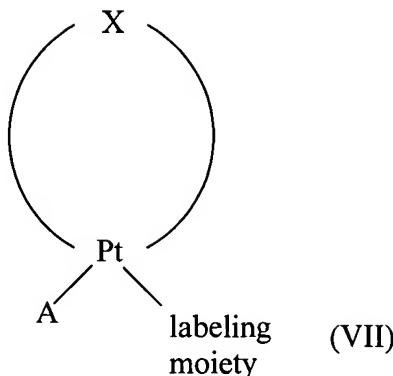
91. (Previously Presented) The labeling substance according to claim 68, wherein the nucleotide is adenine, thymidine, cytosine, and either guanine or uridine.

92. (Previously Presented) The labeling substance according to claim 68, wherein the nucleotide is a purine.

93. (Currently Amended) A kit for labeling a nucleotide comprising:

a nucleotide; and

a labeling substance having formula VII,



wherein:

X represents an aliphatic diamine;

A represents a reactive moiety capable of reacting with the nucleotide, thereby attaching the nucleotide to the labeling substance when the reactive moiety reacts with the nucleotide;

the labeling moiety comprises a spacer comprising an electron donating moiety bonded to the platinum atom, a chain having at least four carbon atoms and at least one oxygen atom in the chain, the chain attached to the electron donating moiety, and a label attached to the end of the chain distal to the electron donating moiety.

94. (Previously Presented) The kit according to claim 93, wherein X represents an aliphatic diamine having 2-6 carbon atoms.

95. (Previously Presented) The kit according to claim 93, wherein X represents an aliphatic diamine having the formula  $G_2NCH_2CH_2NG_2$ , wherein G represents H or an alkyl group of from 1 to 6 carbon atoms.

96. (Previously Presented) The kit according to claim 93, wherein X represents

ethylenediamine.

97. (Previously Presented) The kit according to claim 93, wherein X represents N,N,N',N'-tetramethylethylenediamine.

98. (Previously Presented) The kit according to claim 93, wherein A represents NO<sub>3</sub><sup>-</sup>, SO<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>, I<sup>-</sup>, other halogen or Me<sub>2</sub>SO.

99. (Previously Presented) The kit according to claim 93, wherein A represents NO<sub>3</sub><sup>-</sup>.

100. (Previously Presented) The kit according to claim 93, wherein the spacer comprises no more than twenty carbon atoms.

101. (Previously Presented) The kit according to claim 100, wherein the carbon atoms are non-branched.

102. (Cancelled) ~~The kit according to claim 93, wherein the spacer comprises at least four carbon atoms and at least one heteroatom.~~

103. (Cancelled) ~~The kit according to claim 102, wherein the heteroatom is oxygen.~~

104. (Previously Presented) The kit according to claim 93, wherein the spacer is 1,8-diamino-3,6-dioxaoctane.

105. (Cancelled) ~~The kit according to claim 93, wherein the spacer is an oligolysine or a polylysine.~~

106. (Previously Presented) The kit according to claim 93, wherein the electron donating moiety is an amino group or a thiolate group.

107. (Previously Presented) The kit according to claim 106, wherein the amino group is

an aromatic amino group.

108. (Previously Presented) The kit according to claim 106, wherein the amino group is an imidazole or purine group.

109. (Previously Presented) The kit according to claim 93, wherein the label is radioactive.

110. (Previously Presented) The kit according to claim 93, wherein the label is an enzyme.

111. (Previously Presented) The kit according to claim 93, wherein the label is a component of a specific binding pair.

112. (Previously Presented) The kit according to claim 111, wherein the specific binding pair is biotin and either avidin or streptavidin.

113. (Previously Presented) The kit according to claim 93, wherein the label is a dye, a fluorochrome, or a reducing agent.

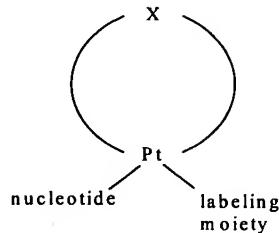
114. (Previously Presented) The kit according to claim 93, wherein the label is digoxxygenin.

115. (Previously Presented) The kit according to claim 93, wherein the nucleotide is adenine, thymidine, cytosine, guanine, or uridine.

116. (Previously Presented) The kit according to claim 93, wherein the nucleotide is a mixture of adenine, thymidine, cytosine, and either guanine or uridine, or guanine and uridine.

117. (Previously Presented) The kit according to claim 93, wherein the nucleotide is a purine.

118. (Currently Amended) A kit for producing a labeled nucleic acid comprising:  
a labeled nucleotide having formula:



wherein X represents an aliphatic diamine; and

the labeling moiety comprises a label and a spacer, wherein the spacer is coupled at one end to the Pt atom and at the other end to the label, the spacer comprising a chain having at least four carbon atoms and at least one oxygen atom in the chain; and

unlabeled nucleotides.

119. (Previously Presented) The kit according to claim 118, wherein X represents an aliphatic diamine having 2-6 carbon atoms.

120. (Previously Presented) The kit according to claim 118, wherein X represents an aliphatic diamine having the formula  $G_2NCH_2CH_2NG_2$ , wherein G represents H or an alkyl group of from 1 to 6 carbon atoms.

121. (Previously Presented) The kit according to claim 118, wherein X represents ethylenediamine.

122. (Previously Presented) The kit according to claim 118, wherein X represents  $N,N,N',N'$ -tetramethylethylenediamine.

123. (Previously Presented) The kit according to claim 118, wherein the spacer comprises no more than twenty carbon atoms.

124. (Previously Presented) The kit according to claim 123, wherein the carbon atoms are non-branched.

125. (Cancelled) ~~The kit according to claim 118, wherein the spacer comprises at least four carbon atoms and at least one heteroatom.~~

126. (Cancelled) ~~The kit according to claim 125, wherein the heteroatom is oxygen.~~

127. (Currently Amended) The kit according to claim 118 ~~125~~, wherein the spacer is 1,8-diamino-3,6-dioxaoctane.

128. (Cancelled) ~~The kit according to claim 118, wherein the spacer is an oligolysine or a polylysine.~~

129. (Previously Presented) The kit according to claim 118, wherein the label is radioactive.

130. (Previously Presented) The kit according to claim 118, wherein the label is an enzyme.

131. (Previously Presented) The kit according to claim 118, wherein the label is a component of a specific binding pair.

132. (Previously Presented) The kit according to claim 131, wherein the specific binding pair is biotin and either avidin or streptavidin.

133. (Previously Presented) The kit according to claim 118, wherein the label is a dye, a fluorochrome, or a reducing agent.

134. (Previously Presented) The kit according to claim 118, wherein the label is digoxigenin.

135. (Previously Presented) The kit according to claim 118, wherein the labeled nucleotide is labeled adenine, thymidine, cytosine, guanine, uridine, or combinations thereof.

136. (Previously Presented) The kit according to claim 118, wherein the unlabeled nucleotide is adenine, thymidine, cytosine, guanine, uridine, or combinations thereof.

137. (Previously Presented) The kit according to claim 118, wherein the labeled nucleotide is a purine.